Magnetic resonance imaging of multiple sclerosis

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摘要

Abstract

Magnetic resonance imaging (MRI) has played a central role in the clinical management and scientific investigation of multiple sclerosis (MS) and has become the most important ancillary tool for diagnosing and monitoring the disease. Conventional MRI techniques are used to assess overt lesions and atrophy in the central nervous system and include spin-echo T2-weighted, pre- and post-gadolinium-enhanced spin-echo T1-weighted, and fluid-attenuated inversion-recovery images. Advanced MRI techniques such as diffusion-weighted imaging, magnetization transfer imaging, magnetic resonance spectroscopy, and functional MRI have increased our understanding of the pathogenesis of MS. The role of these newer techniques in clinical practice remains under investigation. In this review, we will focus on the role of MRI in the diagnosis and management of MS. We will also review how advanced MRI techniques contribute to our understanding of MS.